

**Appln No. 10/813,329**  
**Amdt date September 28, 2005**  
**Reply to Office action of N/A**

**Amendments to the Specification:**

Please amend the paragraphs beginning on page 5, lines 7-31 as follows:

Referring now to FIG. 1, an angular position sensor 10 includes a transceiver transmitter 12 and a receiver 16 having a coupler disk 14 interposed therebetween. As can be seen in FIG. 2, both the transceiver transmitter 12 and the receiver 16 each have formed thereon a plurality of loop antennas 22. The loop antennas are formed from independent spiral conductive coils that are segmentally arranged in a circular pattern around the respective disk of the transmitter and the receiver. The six antennas 22 of FIG. 2 completely encircle the 360 degrees of the disk. While six loop antennas 22 are shown in FIG. 2, the number of loop antennas on the transmitter/receiver depends on the desired phase separation between adjacent channels, and may be different in other embodiments.

The transceiver transmitter 12 and the receiver 16 are substantially fixed with respect to one another. The coupler disk 14 turns in accordance with the mechanical turn of the device in which the angular sensor is used. Each loop antenna 22 in the transmitter 12 is used to transmit a signal that is received by a corresponding loop antenna 22 in the receiver. When there is no interfering (attenuating) object in the signal path, the amplitude of the received signal is maximum. However, if a attenuating object is used to cause interference in this path, the amplitude of the received signal is attenuated. The received signal is attenuated proportionally to the amount of interference provided by the interfering object.

Please amend the paragraph beginning on page 7, lines 6-19 as follows:

Meanwhile, N received signals  $R_1$  through  $R_N$  are generated by the angular position sensor 10. Since the coupler pattern 34 interferes with and attenuates the transmission of signal between the loop antennas 22 of the transceiver transmitter 12 and the receiver 16, the received signals have different amplitude based on the angular position of the coupler disk 14. The signal amplitude at each receiver ( $R_i$ ), for example, is defined by  $R_i(t) = A_i \cos(\omega_c t)$ , where  $A_i = A \cos[\theta + 2\pi(i/N)]$ . In other words, while  $A$  is the magnitude of the signal transmitted by each of the

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loop antennas 22 in the ~~transceiver~~ transmitter 12, due to variable attenuation provided by the coupler disk 14, the magnitude of the signal received by the loop antennas 22 in the receiver 16 are different from one another and are given by  $A_i = A \cos [\theta + 2\pi (i/N)]$ , and depends on the angular position ( $\theta$ ) of the coupler disk 14.